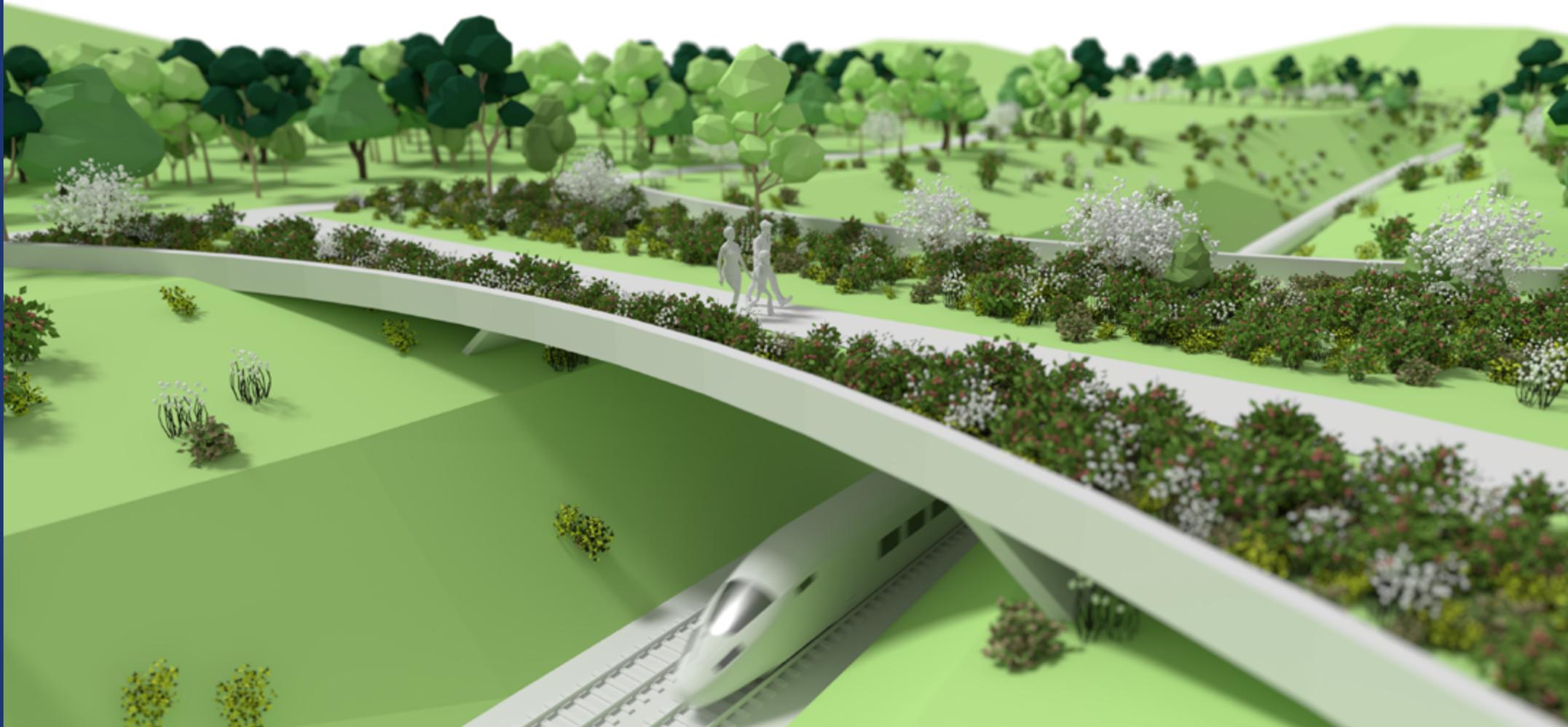


HS2

More than a railway

HS2 and the natural environment



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What next?



Leeds

Manchester

Sheffield

Crewe

East Midlands

Birmingham

Illustrative network of habitats and green spaces

London

More than a railway

HS2 is the first new intercity railway to be built north of London in over 100 years. When it's fully up and running, high speed trains will carry **over 300,000** people a day – creating vital rail capacity and kick-starting thousands of new jobs. But there is more to HS2 than that.

A construction project of this size can be seen as a threat to nature. Yet it can also be an opportunity to support the natural environment, so we're working on a **green corridor** which will be home to wildlife and integrate HS2 into the landscape.

A network of habitats ranging from woodland and meadows to wetland and ponds will stretch along much of the 345 miles of track. They will replace any habitats affected by the construction of HS2, while conserving and enhancing some too.

Helped by our community funds, there will be ways for local people to enjoy the countryside, through new access routes and open spaces. Yet we think even more can be done as the green corridor takes shape.

Our vision: **the green corridor**



Multi-functional green spaces that **bring people, places and nature together**



A **network of wildlife habitats**, supporting important ecosystems



Extensive planting and new woodlands – tailored to each location



Local communities involved in design and delivery



Supporting **locally-led environmental projects** outside the immediate corridor

A balanced footprint

Inevitably, HS2 is going to leave a footprint on the British countryside. That's something we want to carefully manage, while **improving the environment** where we can.

At a local level, new wildlife habitats ranging from badger setts to bat houses will support any animals affected by the construction of HS2. In many cases we'll be able to leave behind bigger and better habitats than what's already there. We'll also have a responsible approach to natural resources, with most of the material we excavate for tunnels and cuttings being used as part of our earthworks. Ultimately, the green corridor should be able to support delicately balanced ecosystems running through the spine of the country.

Provisional forecast, from London to the West Midlands

Affected by HS2

Up to

3.8 km²



of woodland, ranging from **semi-natural woods** to **non-native conifer plantations**

This includes

0.3 km²



of ancient woodlands, across **32 sites**

Created by HS2

Over

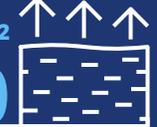
9 km²



of new native woodland, featuring **over 40** different species of trees

This includes

275,000 m²



of ancient woodland soils relocated amongst **over 1 km²** of new woodland

25 km²



of **habitat** acquired by HS2 Ltd for the railway and wider green corridor

This includes

3.2 km²



of **habitats of principal importance**

SPECIFIC WILDLIFE HABITATS



including those for **bats, badgers** and **great crested newts**

130 million tonnes



of material **excavated** during construction

33.4 km²



of habitat left behind in the green corridor – **over 30% more** than originally acquired

This includes

5.2 km²



of **habitats of principal importance** – **60% more** than the amount affected

Tailor-made wildlife habitats including

226



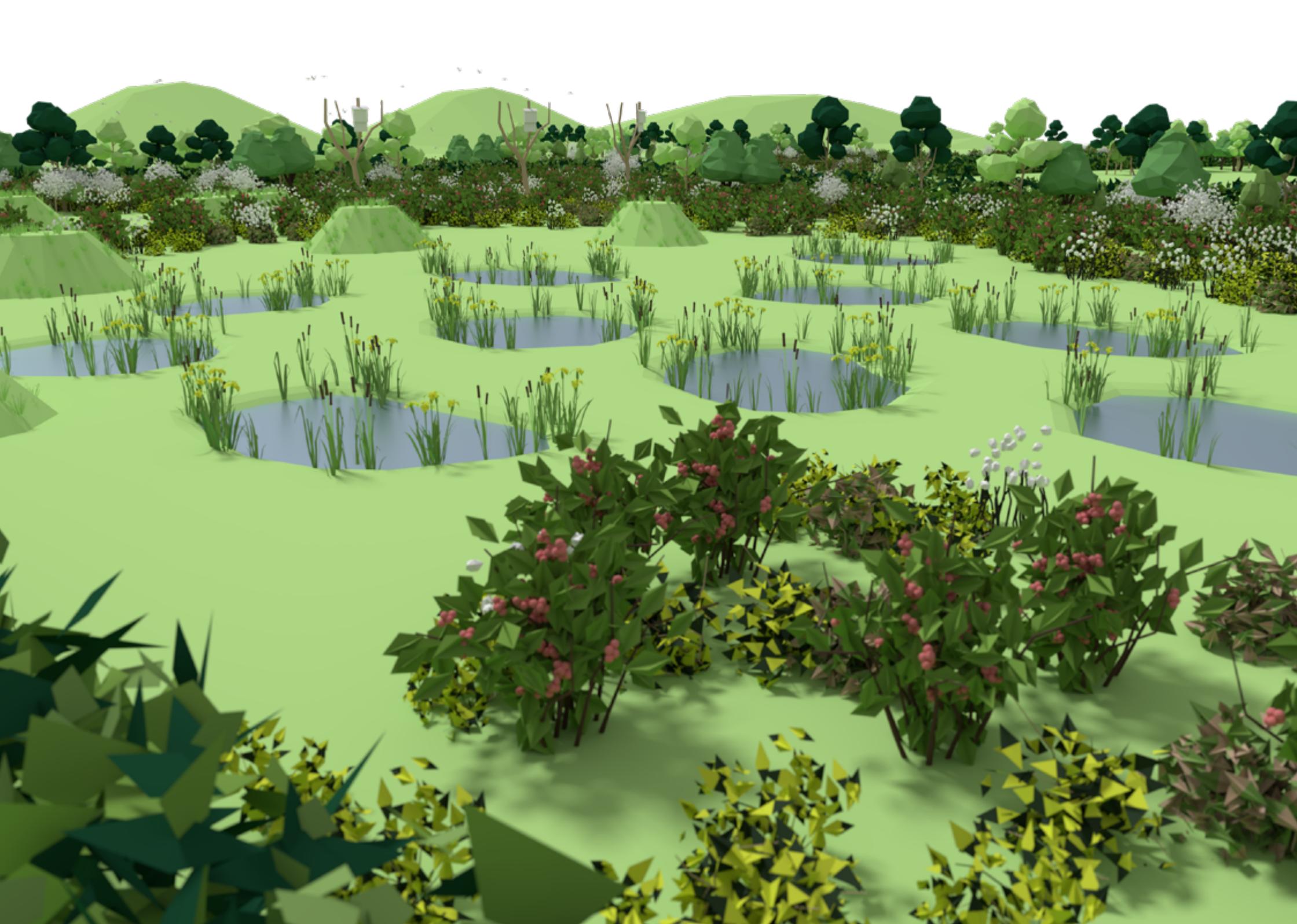
breeding ponds for great crested newts – **more than double** the number affected by the railway

Around

90%



re-used as part of our earthworks





Every location is unique

As we work towards this vision for the natural environment, we will go **beyond** a one-size-fits-all approach.

Through tailored landscape design, we think the appearance of the corridor can reflect its surroundings and match the character of each unique location it touches. Involving local people can help us to get that right. Importantly, although we're planting around 7 million new trees and shrubs on Phase One of the railway, we're prioritising quality over quantity. Over 40 different species of tree are being grown in our nursery, including species that are native to each area.

Similarly, the wildlife habitats we're creating are specially designed for the species that use them, based on the thousands of ecology surveys we've completed about their needs. It's vital that all the green spaces we conserve, restore and transform are designed to truly belong to each location.

Snapshot:

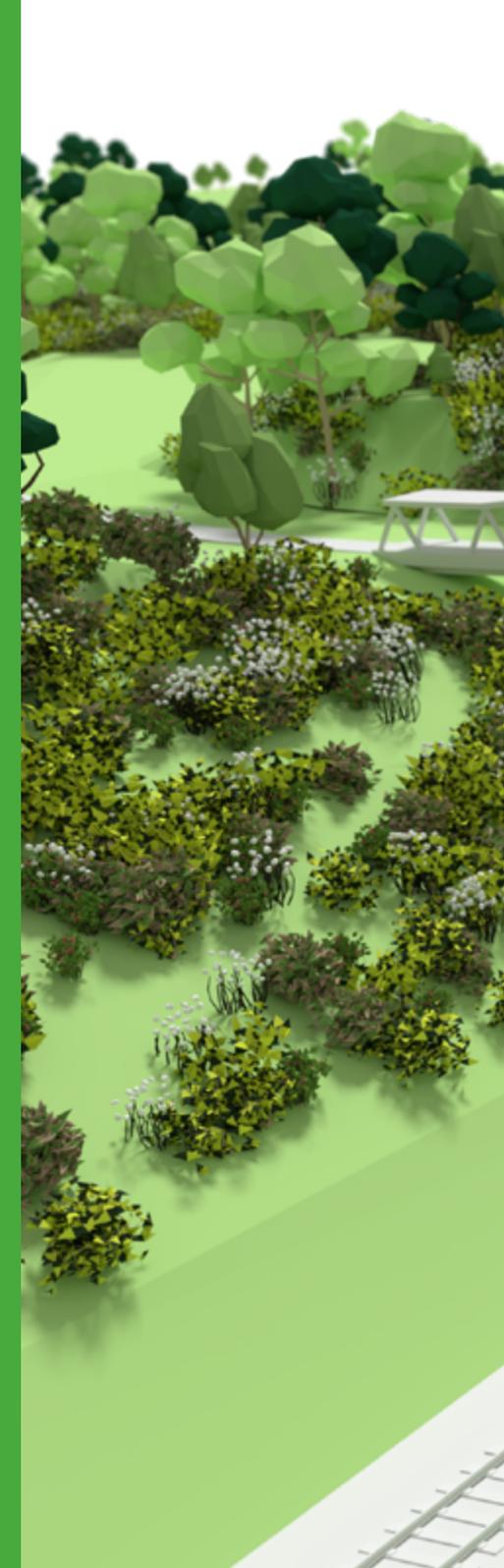
Chilterns Northern Portal

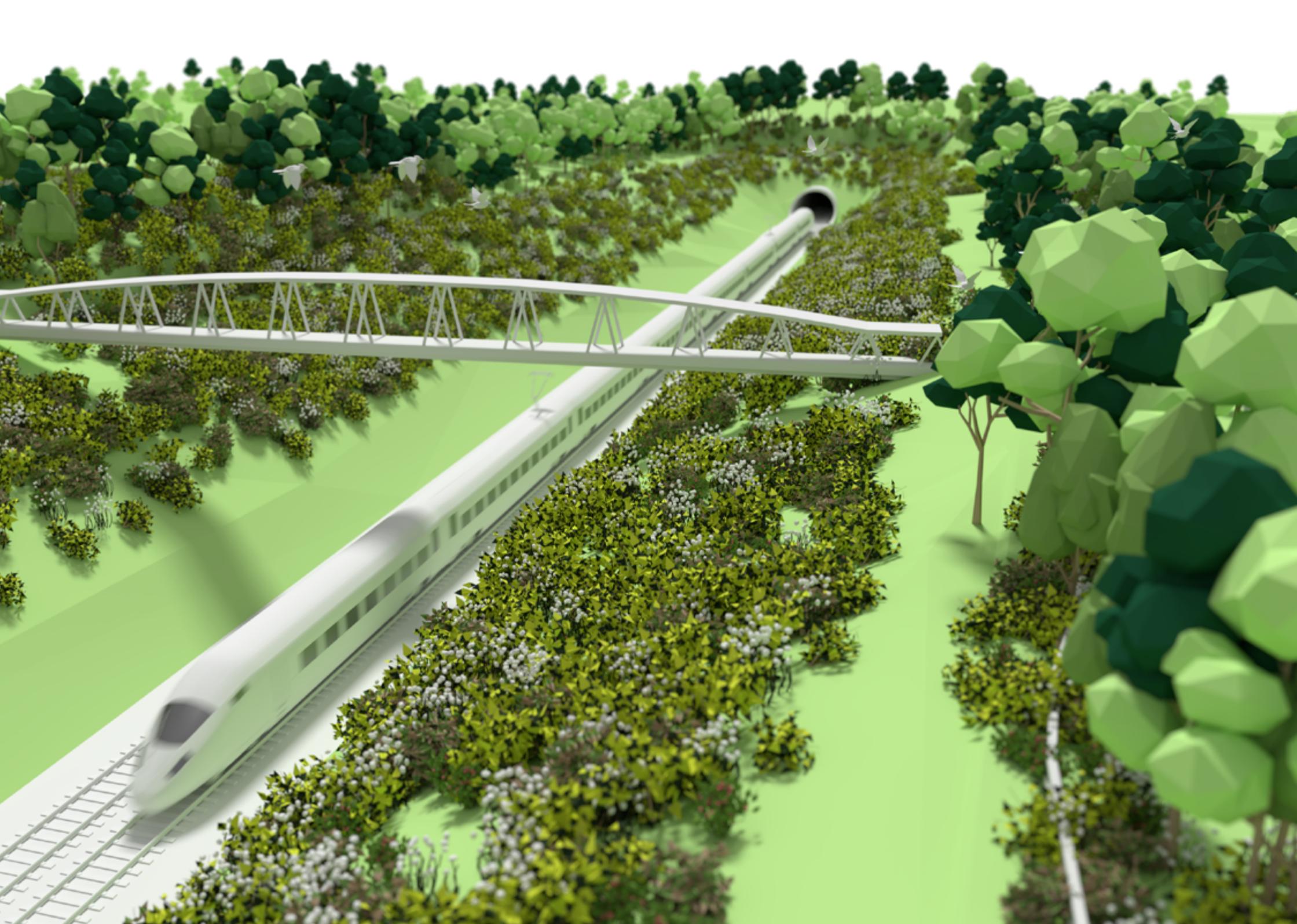
Along the entire route, one of our first priorities has been to avoid or reduce any impact on the natural environment. Over half of the London to Birmingham line will be below surface level, passing through tunnels and cuttings, while we're building hundreds of viaducts and bridges so the railway will be permeable to wildlife, as well as waterways.

Our extended tunnel under the Chilterns will run for almost 10 miles, protecting the local environment.

Where it emerges, extensive planting will reflect the surroundings, including new woodlands which will link with existing ones. Through the green corridor, we'll be taking the chance to join up numerous disconnected habitats in this way.

Crucially we'll be creating new homes for wildlife here, including a bat house, designed to support a nearby colony of Common Pipistrelle bats. It is one of four bat houses to be built from London to the West Midlands. They will be significant structures tailored to the needs of local bat species.









Snapshot:

Ladbroke Cutting

At this cutting in Warwickshire, the railway will be almost 30 metres below the surface, reducing its visual impact on the landscape. We're creating new wildlife habitats at the site, including woodlands and 12 breeding ponds for great crested newts – just some of the 226 to be built alongside the railway. Any newts affected by construction nearby will be relocated to this area once the new habitat has become fully established. Places for animals to hibernate, including newts, will also be constructed here.

A green bridge will be built – one of the numerous crossings and underpasses that will help people and animals cross the line safely.

By building bridges in the right locations we help local wildlife to safely maintain their existing travel patterns. Attention to detail is paramount in a project like this.

Snapshot:

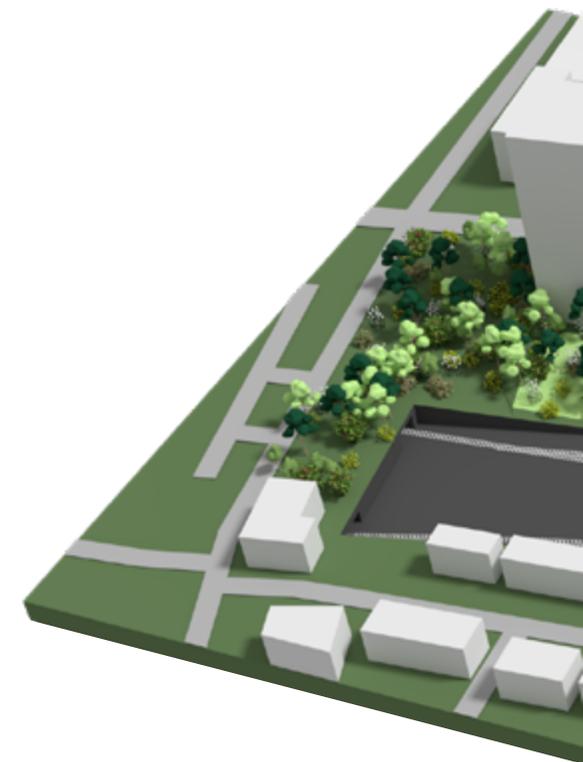
Camden Environmental Projects

It's important to remember that urban locations can benefit from the green corridor too. In built-up areas like London for example, our environmental work includes supporting existing, grassroots projects. In the heart of Camden, our activity ranges from improving a nature reserve to supporting a local charity.

At the Adelaide Road Nature Reserve we've enhanced conditions for local wildlife, such as building new bat boxes, bug hotels and spaces for animals to hibernate, alongside public improvements ranging from seating to fencing.

This work was completed in November 2017, making it one of HS2's first environmental schemes.

Nearby, we're helping local people connect with nature by supporting the Castlehaven Community Association. We awarded £74,000 to the association to deliver their **greengage** project, which will involve thousands of residents in developing a nature park, delivering community clean-ups and supporting wildlife habitats. It is being backed by our Community and Local Environment Fund and is a good example of how we can empower communities along the route.



**Adelaide Road
Nature Reserve**



Castlehaven
Community Centre



A stylized, low-poly illustration of a green landscape. In the foreground, there are yellow and white flowers. In the middle ground, there is a pond with reeds and lily pads. In the background, there are several green trees with brown trunks. The overall style is modern and geometric.

Community-led

We will work with local communities to create the green corridor. This includes the chance for local people to get involved in everything from landscape design to tree planting.

From the outset, funds are being put into local hands to deliver environmental improvements that go above and beyond our own. A total of £6m has been awarded to local groups in the Chilterns and the Colne Valley, which could support projects ranging from new habitats to cycle routes. In addition, our £45m Community & Environment Fund and Business & Local Economy Fund, are a way for people to make their own landscape and conservation ideas become a reality.

There are opportunities to improve the natural environment outside the immediate boundaries of the railway too. It's one of the guiding principles of a £5m Woodland Fund, which has been set up to encourage landowners up to 25 miles away from Phase One to create new woodlands or restore existing ancient woodland sites.

These various funds are a small part of our environmental work. However, their power to involve local people is crucial. We'll also be working with landowners and wildlife trusts along the route on long-term maintenance to ensure whatever we create can thrive well beyond the construction of HS2.

What next?

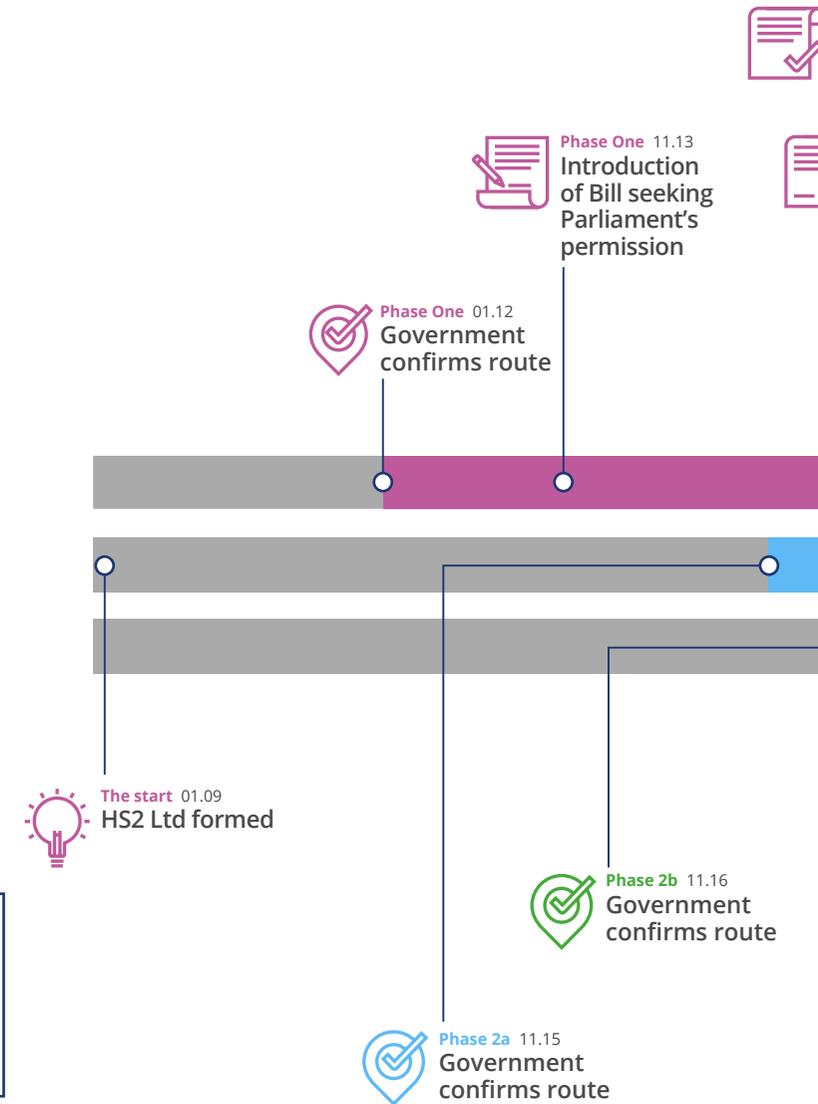
We are at the beginning of a long journey.

In 2017 we started work on our first new wildlife habitats for protected wildlife species. We also appointed our main works contractors and started the next stage of design for the railway. As our main civil engineering work progresses, so will our various landscape, habitat, and woodland creation initiatives.

Not only are we just in the early days of design and construction, we can only make the most of this opportunity with the future involvement of local people and environment groups. That work starts now.

Our journey to operation

2009 2010 2011 2012 2013 2014 2015 2016





Phase One 11.16
Enabling Works
Contract awarded

Phase One 02.17
Royal Assent
for Phase One
granted by
Parliament

Phase One 07.17
Main civils
design work
commences

Phase One 02.19
Main civils
construction
works commence

Phase 2a 12.19
Royal Assent
for Phase 2a
granted by
Parliament

Phase 2a 09.21
Main civils
construction
works commence

Phase One 04.24
Delivery of
first trains for
infrastructure
testing

Phase One 12.26
First passengers
travel on HS2
services

Phase 2a 12.27
First passengers
travel on Phase
2a services

Phase 2a 07.17
Introduction
of Bill seeking
Parliament's
permission

Phase 2a 09.19
Main civils
design work
commences

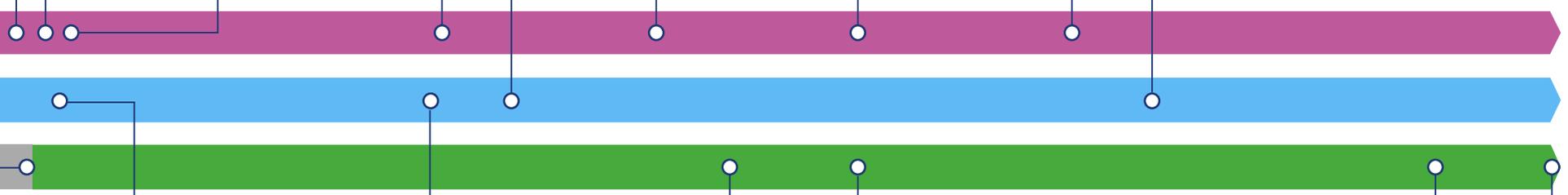
Phase 2b 10.22
Target date
for Phase 2b
Royal Assent

Phase 2b 10.22
Main civils
design work
commences

Phase 2b 04.24
Main civils
construction
works commence

Phase 2b 08.31
Delivery of
first trains for
infrastructure
testing

Phase 2b 12.33
First passengers
travel on full
HS2 services



HS2

www.gov.uk/hs2

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